

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A print data providing apparatus for providing an external device with a print document comprised of a plurality of print data files described in different formats, said print data providing apparatus comprising:

an archiving unit operable to archive the plurality of the print data files into an archived file; and

an output unit operable to output the archived file to the external device,
wherein said archiving unit archives the plurality of the print data files into the archived file after changing a name of one print data file of the plurality of the print data files to a specified name, the one print data file being a Top Page print data file, and the specified name being a predetermined name for allowing a printing apparatus to identify a print data file as the Top Page print data file,

wherein the Top Page print data file is a predetermined print data file in the print document which is firstly required by ~~a printing~~ the printing apparatus in order to print the print document, and

wherein the printing apparatus interprets the Top Page print data file and places bit map data obtained by rasterization based on data of each of the print data files that the Top Page print data file references.

2. (Canceled)

3. (Currently Amended) A print data providing apparatus for providing an external device with a print document comprised of a plurality of print data files described in different formats, said print data providing apparatus comprising:

an archiving unit operable to archive the plurality of the print data files into an archived file; and

an output unit operable to output the archived file to the external device,
wherein said archiving unit archives one print data file of the plurality of the print data files in a specified position in the archived file, the one print data file being a Top Page print data file, and the specified position being a predetermined position for allowing a printing apparatus to identify a print data file as the Top Page print data file,

wherein the Top Page print data file is a predetermined print data file in the print document which is firstly required by ~~a printing~~ the printing apparatus in order to print the print document, and

wherein the printing apparatus interprets the Top Page print data file and places bit map data obtained by rasterization based on data of each of the print data files that the Top Page print data file references.

4. (Previously Presented) The print data providing apparatus according to Claim 1, wherein said output unit transmits to the external device information on a format of the archived file and a format of the print data files that are archived into the archived file.

5. (Previously Presented) The print data providing apparatus according to Claim 1, wherein said archiving unit archives the plurality of the print data files in a Tar Ball format.

6. (Previously Presented) The print data providing apparatus according to Claim 1, wherein said archiving unit archives the plurality of the print data files in a MIME format.

7. (Previously Presented) The print data providing apparatus according to Claim 1, wherein said archiving unit archives the plurality of the print data files in a compressed format.

8. (Previously Presented) The print data providing apparatus according to Claim 1, further comprising:

a receiving unit operable to receive the plurality of the print data files via a transmission line; and

a first determination unit operable to determine whether or not the received plurality of the print data files compose a single print document,

wherein said archiving unit archives the plurality of the print data files into the archived file when it is determined that the plurality of the print data files compose the print document as a result of the determination by said first determination unit.

9. (Previously Presented) The print data providing apparatus according to Claim 1, further comprising:

- a receiving unit operable to receive the plurality of the print data files via a transmission line;
- a first determination unit operable to determine whether or not the received plurality of the print data files compose a single print document; and
- a second determination unit operable to determine whether or not the received print data files is archive data,

wherein said archiving unit archives the print data files into the archived file when said second determination unit determines that the print data files are not archive data and said first determination unit determines that the print data files are a plurality of print data files composing a single print document.

10. (Previously Presented) The print data providing apparatus according to Claim 1, wherein the external device is a printing apparatus connected to said print data providing apparatus via a transmission line, and

said output unit transmits the archived file to the printing apparatus.

11. (Previously Presented) The print data providing apparatus according to Claim 1, wherein the external device is a removable storage medium mounted on said print data providing apparatus.

12. (Previously Presented) A print data providing apparatus for providing a printing apparatus connected to said print data providing apparatus via a transmission line with a print document comprised of a plurality of print data files described in different formats, said print data providing apparatus comprising

a sequential transmission unit operable to sequentially transmit to the printing apparatus the plurality of the print data files accompanied by information indicating that the plurality of the print data files to be transmitted are the print data files composing the print document,

wherein said sequential transmission unit transmits sequentially the plurality of the print data files accompanied by information on a total number of the plurality of the print data files composing the print document and a transmitting order of the plurality of the print data files composing the print document,

wherein one of the plurality of print data files is a Top Page print data file, the Top Page print data file being a predetermined print data file in the print document which is firstly required by the printing apparatus in order to print the print document,

wherein the printing apparatus interprets the Top Page print data file and places bit map data obtained by rasterization based on data of each of the print data files that the Top Page print data file references, and

wherein the printing apparatus is able to identify the Top Page print data file on a basis of the transmitting order of the plurality of the print data files.

13. (Previously Presented) The print data providing apparatus according to Claim 12,

wherein the information is attached to one print data file to be transmitted first, of the plurality of the print data files to be transmitted.

14. (Previously Presented) The print data providing apparatus according to Claim 12, wherein the information contains information on a format of the plurality of the print data files to be transmitted and a method of push transmitting the plurality of the print data files to the printing apparatus.

15. (Canceled)

16. (Previously Presented) A print data providing apparatus for providing a printing apparatus connected to said print data providing apparatus via a transmission line with a print document comprised of a plurality of print data files described in different formats, said print data providing apparatus comprising

a sequential transmission unit operable to sequentially transmit to the printing apparatus the plurality of the print data files accompanied by information indicating that the plurality of the print data files to be transmitted are the print data files composing the print document,

wherein one of the plurality of print data files is a Top Page print data file, the Top Page print data file being a predetermined print data file in the print document which is transmitted to the printing apparatus first out of the plurality of print data files composing the print document,

wherein the printing apparatus interprets the Top Page print data file and places bit map

data obtained by rasterization based on data of each of the print data files that the Top Page print data file references, and

wherein said sequential transmission unit transmits the plurality of the print data files accompanied by a flag indicating a completion of the transmission, the flag being attached to one print data file to be transmitted to the printing apparatus last out of the plurality of the print data files composing the print document.

17. (Previously Presented) The print data providing apparatus according to Claim 12, wherein said sequential transmission unit sequentially transmits the plurality of the print data files accompanied by information indicating a format of one print data file that is presently transmitted, of the plurality of the print data files.

18. (Previously Presented) The print data providing apparatus according to Claim 17, wherein said sequential transmission unit sequentially transmits the plurality of the print data files with a data name presenting a format of each of the plurality of the print data files.

19. (Previously Presented) The print data providing apparatus according to Claim 17, wherein said sequential transmission unit sequentially transmits the plurality of the print data files accompanied by a header indicating a format of each of the plurality of the print data files.

20. (Previously Presented) The print data providing apparatus according to Claim 12, wherein said sequential transmission unit firstly transmits one print data file of the plurality of the print data files, the one print data file being required by the printing apparatus in order to print the print document.

21. (Previously Presented) The print data providing apparatus according to Claim 12, further comprising:

a receiving unit operable to receive the plurality of the print data files via the transmission line; and

a determination unit operable to determine whether or not the received plurality of the print data files compose the print document,

wherein said sequential transmission unit sequentially transmits the plurality of the print data files, to the printing apparatus, accompanied by information indicating that the plurality of the print data files are the print data files composing the print document when it is determined that the plurality of the print data files compose the print document as a result of the determination by said determination unit.

22. (Currently Amended) A printing apparatus for acquiring a print document from a print data providing apparatus connected to said printing apparatus via a transmission line, and for printing the acquired print document, said printing apparatus comprising:

an acquisition unit operable to acquire an archived file from the print data providing

apparatus, the archived file being an archive of a plurality of print data files described in different formats, the plurality of the print data files composing a print document;

an expansion unit operable to expand the acquired archived file into each of the plurality of the print data files; and

a print unit operable to print a print document, the print document being a combination of each of the expanded print data files,

wherein the plurality of the print data files are archived into the archived file after a name of one print data file of the plurality of the print data files is changed to a specified name, the one print data file being a Top Page print data file, and the specified name being a predetermined name for allowing said printing apparatus to identify a print data file as the Top Page print data file,

wherein the Top Page print data file is a predetermined print data file in the print document which is firstly required by said printing apparatus in order to print the print document, and

wherein said printing apparatus interprets the Top Page print data file and places bit map data obtained by rasterization based on data of each of the print data files that the Top Page print data file references.

23. (Previously Presented) The printing apparatus according to Claim 22, wherein said print unit further includes an analysis unit operable to analyze the one specified print data file after expanding the archived file into the expanded print data files, and

to combine each of the expanded print data files so that a print picture presented by each of the expanded print data files may compose a single print document, and
wherein said print unit is operable to print each of the expanded print data files according to the combination made by said analysis unit.

24. (Previously Presented) The printing apparatus according to Claim 23,
wherein said analysis unit analyzes the one print data file of the expanded print data files,
the one print data file having the specified name, and combines each of the expanded print data files.

25. (Previously Presented) The printing apparatus according to Claim 23,
wherein said analysis unit analyzes the one print data file of the expanded print data files,
and combines each of the expanded print data files, the one print data file being archived in a specified position in the archived file.

26. (Previously Presented) A printing apparatus for acquiring a print document from a print data providing apparatus connected to said printing apparatus via a transmission line, and for printing the acquired print document,
wherein the print document is comprised of a plurality of print data files described in different formats, and
said printing apparatus comprises:

a sequential acquisition unit operable to sequentially acquire, from the print data providing apparatus, the plurality of the print data files accompanied by information indicating that the plurality of the print data files compose the print document; and

a print unit operable to detect, based on the information, that the acquisition of the plurality of the print data files composing the single print document is complete, and print the print document, the print document being a combination of each of the acquired print data files, wherein said sequential acquisition unit sequentially acquires the plurality of the print data files accompanied by information on a total number of the print data files composing the print document and a transmitting order of the plurality of the print data files composing the print document,

wherein one of the plurality of print data files is a Top Page print data file, the Top Page print data file being a predetermined print data file in the print document which is firstly required by said printing apparatus in order to print the print document,

wherein said printing apparatus interprets the Top Page print data file and places bit map data obtained by rasterization based on data of each of the print data files that the Top Page print data file references, and

wherein said printing apparatus is able to identify the Top Page print data file on a basis of the transmitting order of the plurality of the print data files.

27. (Previously Presented) The printing apparatus according to Claim 26, wherein said print unit detects, based on the information, that the acquisition of the total

number of the print data files is complete, and prints the print document.

28. (Previously Presented) The printing apparatus according to Claim 26, wherein said sequential acquisition unit acquires the plurality of the print data files composing the print document accompanied by a flag indicating a completion of a transmission of the plurality of the print data files, and

 said print unit detects that the acquisition of the print data files is complete based on the flag, and prints the print document.

29. (Currently Amended) A print data generating apparatus for generating print data files so that a printing apparatus may print a print document comprised of a plurality of print data files described in different formats, said print data generating apparatus comprising

 an archiving unit operable to archive the plurality of the print data files into a file after the printing apparatus changes a name of one print data file of the plurality of the print data files to a specified name, the one print data file being a Top Page print data file, and the specified name being a predetermined name for allowing the printing apparatus to identify a print data file as the Top Page print data file,

 wherein the Top Page print data file is a predetermined print data file in the print document which is firstly required by the printing apparatus in order to print the print document, and

 wherein the printing apparatus interprets the Top Page print data file and places bit map

data obtained by rasterization based on data of each of the print data files that the Top Page print data file references.

30. (Currently Amended) A print data generating apparatus for generating print data files so that a printing apparatus may print a print document comprised of a plurality of print data files described in different formats, said print data generating apparatus comprising an archiving unit operable to archive one print data file of the plurality of the print data files in a specified position in an archived file, the one print data file being a Top Page print data file, and the specified position being a predetermined position for allowing the printing apparatus to identify a print data file as the Top Page print data file,

wherein the Top Page print data file is a predetermined print data file in the print document which is firstly required by the printing apparatus in order to print the print document, and

wherein the printing apparatus interprets the Top Page print data file and places bit map data obtained by rasterization based on data of each of the print data files that the Top Page print data file references.

31. (Currently Amended) A print system comprising a print data providing apparatus and a printing apparatus mutually connected via a transmission line, wherein the print data providing apparatus includes:

an archiving unit operable to archive a plurality of print data files described in

different formats into an archive file, the plurality of the print data files composing a print document; and

a transmission unit operable to transmit the archived file to the printing apparatus, wherein the printing apparatus includes:

an acquisition unit operable to acquire, from the print data providing apparatus, the archived file being an archive of the plurality of the print data files described in different formats, the plurality of the print data files composing the print document;

an expansion unit operable to expand the acquired archived file into each of the plurality of the print data files; and

a print unit operable to print the print document, the print document being a combination of each of the expanded print data files,

wherein the archiving unit archives the plurality of the print data files into the archived file after changing a name of one print data file of the plurality of the print data files to a specified name, the one print data file being a Top Page print data file, and the specified name being a predetermined name for allowing the printing apparatus to identify a print data file as the Top Page print data file,

wherein the Top Page print data file is a predetermined print data file in the print document which is firstly required by the printing apparatus in order to print the print document, and

wherein the printing apparatus interprets the Top Page print data file and places bit map data obtained by rasterization based on data of each of the print data files that the Top Page print

data file references.

32. (Previously Presented) A print system comprising a print data providing apparatus and a printing apparatus mutually connected via a transmission line,

wherein the print data providing apparatus includes:

a sequential transmission unit operable to transmit, to the printing apparatus, a plurality of print data files accompanied by information indicating that the plurality of the print data files to be transmitted compose a single print document,

wherein the printing apparatus includes:

a sequential acquisition unit operable to sequentially acquire the plurality of print data files described in different formats accompanied by the information indicating that the plurality of the print data files compose a single print document; and

a print unit operable to print the print document, the print document being a combination of each of the acquired print data files, after all of the plurality of the print data files composing a single print document are acquired,

wherein the sequential transmission unit transmits sequentially the plurality of the print data files accompanied by information on a total number of the plurality of the print data files composing the single print document and a transmitting order of the plurality of the print data files composing the single print document,

wherein one of the plurality of print data files is a Top Page print data file, the Top Page print data file being a predetermined print data file in the print document which is firstly required

by the printing apparatus in order to print the print document,

wherein the printing apparatus interprets the Top Page print data file and places bit map data obtained by rasterization based on data of each of the print data files that the Top Page print data file references, and

wherein the printing apparatus is able to identify the Top Page print data file on a basis of the transmitting order of the plurality of the print data files.

33. (Currently Amended) A print data transmission method for a print system comprising a print data providing apparatus and a printing apparatus mutually connected via a transmission line,

wherein the print data providing apparatus performs the steps of:

archiving a plurality of print data files described in different formats into an archived file, the plurality of the print data files composing a print document; and
transmitting the archived file to the printing apparatus,

wherein the printing apparatus performs the steps of:

acquiring, from the print data providing apparatus, the archived file being an archive of the plurality of the print data files described in different formats, the plurality of the print data files composing a print document;

expanding the acquired archived file into each of the print data files; and
printing the print document being a combination of each of the expanded print data files,

wherein the archiving step comprises archiving the plurality of the print data files into the archived file after changing a name of one print data file of the plurality of the print data files to a specified name, the one print data file being a Top Page print data file, and the specified name being a predetermined name for allowing the printing apparatus to identify a print data file as the Top Page print data file,

wherein the Top Page print data file is a predetermined print data file in the print document which is firstly required by the printing apparatus in order to print the print document, and

wherein the printing apparatus interprets the Top Page print data file and places bit map data obtained by rasterization based on data of each of the print data files that the Top Page print data file references.

34. (Previously Presented) A print data transmission method for a print system comprising a print data providing apparatus and a printing apparatus mutually connected via a transmission line,

wherein the print data providing apparatus performs a sequential transmission step of sequentially transmitting, to the printing apparatus, a plurality of print data files accompanied by information indicating that the plurality of print data files to be transmitted compose a single print document, and

the printing apparatus performs the steps of:

acquiring sequentially, from the print data providing apparatus, the plurality of the

print data files described in different formats accompanied by information indicating that the plurality of the print data files compose a single print document;

printing the print document, the print document being a combination of each of the acquired print data files, after all of the plurality of the print data files composing a single document are acquired,

wherein the sequential transmission step comprises transmitting sequentially the plurality of the print data files accompanied by information on a total number of the plurality of the print data files composing the single print document and a transmitting order of the plurality of the print data files composing the single print document,

wherein one of the plurality of print data files is a Top Page print data file, the Top Page print data file being a predetermined print data file in the print document which is firstly required by the printing apparatus in order to print the print document,

wherein the printing apparatus interprets the Top Page print data file and places bit map data obtained by rasterization based on data of each of the print data files that the Top Page print data file references, and

wherein the printing apparatus is able to identify the Top Page print data file on a basis of the transmitting order of the plurality of the print data files.

35. (Currently Amended) A computer-readable medium having a program stored thereon for causing a print data providing apparatus to execute a method for providing an external device with a print document comprised of a plurality of print data files described in

different formats, the method comprising:

archiving the plurality of the print data files into an archived file; and

outputting the archived file to the external device,

wherein said archiving comprises archiving the plurality of the print data files into the archived file after changing a name of one print data file of the plurality of the print data files to a specified name, the one print data file being a Top Page print data file, and the specified name being a predetermined name for allowing a printing apparatus to identify a print data file as the Top Page print data file,

wherein the Top Page print data file is a predetermined print data file in the print document which is firstly required by ~~a printing~~ the printing apparatus in order to print the print document, and

wherein the printing apparatus interprets the Top Page print data file and places bit map data obtained by rasterization based on data of each of the print data files that the Top Page print data file references.

36. (Previously Presented) A computer-readable medium having a program stored thereon for causing a data providing apparatus to perform a method for providing an external device with a print document comprised of a plurality of print data files described in different formats, the method comprising

a sequential transmission step of sequentially transmitting, to the external device, the plurality of the print data files accompanied by information indicating that the plurality of the

print data files to be transmitted compose the print document,
wherein said sequential transmission step comprises sequentially transmitting the plurality of the print data files accompanied by information on a total number of the print data files composing the print document and a transmitting order of the plurality of the print data files composing the print document,
wherein one of the plurality of print data files is a Top Page print data file, the Top Page print data file being a predetermined print data file in the print document which is firstly required by the printing apparatus in order to print the print document,
wherein the printing apparatus interprets the Top Page print data file and places bit map data obtained by rasterization based on data of each of the print data files that the Top Page print data file references, and
wherein the printing apparatus is able to identify the Top Page print data file on a basis of the transmitting order of the plurality of the print data files.

37. (Currently Amended) A computer-readable medium having a program stored thereon for causing a printing apparatus to execute a method for acquiring a print document from a print data providing apparatus connected to the printing apparatus via a transmission line, and for printing the acquired document, the method comprising:
acquiring, from the print data providing apparatus, an archived file being an archive of a plurality of print data files described in different formats, the plurality of the print data files composing a print document;

expanding the acquired archived file into each of the plurality of the print data files; and printing the print document being a combination of each of the expanded print data files, wherein the plurality of the print data files are archived into the archived file after a name of one print data file of the plurality of the print data files is changed to a specified name, the one print data file being a Top Page print data file, and the specified name being a predetermined name for allowing the printing apparatus to identify a print data file as the Top Page print data file,

wherein the Top Page print data file is a predetermined print data file in the print document which is firstly required by the printing apparatus in order to print the print document, and

wherein the printing apparatus interprets the Top Page print data file and places bit map data obtained by rasterization based on data of each of the print data files that the Top Page print data file references.

38. (Previously Presented) A computer-readable medium having a program stored thereon for causing a printing apparatus to execute a method for acquiring a print document from a print data providing apparatus connected to the printing apparatus via a transmission line, and for printing the acquired print document, wherein the print document comprises a plurality of print data files described in different formats, the method comprising:

acquiring sequentially, from the print data providing apparatus, the plurality of the print data files accompanied by information indicating that the plurality of the print data files compose

a single print document; and

detecting, based on the information that the acquisition of the plurality of the print data files composing the single print document is complete, and printing the print document being a combination of each of the acquired print data files,

wherein the plurality of the print data files acquired sequentially from the print data providing apparatus are accompanied by information on a total number of the plurality of the print data files composing the single print document and a transmitting order of the plurality of the print data files composing the single print document,

wherein one of the plurality of print data files is a Top Page print data file, the Top Page print data file being a predetermined print data file in the print document which is firstly required by the printing apparatus in order to print the print document,

wherein the printing apparatus interprets the Top Page print data file and places bit map data obtained by rasterization based on data of each of the print data files that the Top Page print data file references, and

wherein the printing apparatus is able to identify the Top Page print data file on a basis of the transmitting order of the plurality of the print data files.